

State of Louisiana
Department of Transportation and Development (DOTD)
Materials and Testing Section Qualification Procedure
for
Qualified Products List 25

ASPHALT MIX RELEASE AGENTS

MATERIAL SPECIFICATION REFERENCE:

DOTD Standard Specifications, Subsection 503.04

PRELIMINARY REQUIREMENTS:

Qualified Product Evaluation Form

The manufacturer shall submit a standard "Qualified Product Evaluation Form" to the DOTD Materials and Testing Section Coordinator listed below, along with a letter requesting evaluation for the Qualified Products List.

Product Data Sheets

Include product data sheets to provide all pertinent information relative to the product to be evaluated; including, but not limited to, manufacturer's specifications, mixing and dilution instructions, recommended application procedure and rate, typical analysis and a Materials Safety Data Sheet (MSDS).

Sample (to be furnished at no cost the Department)

Submit a one quart sample of the product for evaluation.

TEST REQUIREMENTS:

Laboratory Testing

The material shall exhibit no deleterious effects upon samples of hot mix asphaltic concrete when subjected to the following tests by District Laboratory personnel.

1) Boil Test

- A) Heat sample of Hot Mix Asphaltic Concrete to 230 ± 9°F for 1 hour. Then screen material over 3/8" sieve. Use material retained on 3/8" sieve for this test.
- B) Immediately empty the aggregate-asphalt mixture onto a clean piece of aluminum foil and allow to cool at room temperature for 2 hours ± 5 minutes.

- C) Fill one 400 mL beaker approximately 1/2 full with water and one 400 mL beaker approximately 1/2 full of the Asphalt Mix Release Agent (diluted per manufacturer's instructions) and heat to boiling. Transfer approximately 5 aggregates of the cooled mixture into each beaker. Continue to boil for 10 minutes.
- D) Remove the beakers from the heat source and dip a paper towel into each beaker to skim off any asphalt from the surface.
- E) Drain the liquid from the beakers and empty the remaining mixture onto paper towels.
- F) Visually compare the degree of stripping from the two samples. The stripping from the sample boiled in the Asphalt Mix Release Agent should be no more than 10% greater than the stripping from the sample boiled in water.

2) Rub Test

- A) Apply some of the Asphalt Mix Release Agent (diluted per manufacturer's instructions) to a clean rag and try to rub off the asphalt from some of the cooled + 3/8" hot mix aggregate. If the asphalt comes off the aggregate, the Asphalt Mix Release Agent shall be considered harmful to the asphalt.

3) Retained Stability Test

- A) A minimum of eight standard Marshall test specimens, 4" in diameter and 2 1/2" ∇ 1/4" in height, shall be prepared for each test in accordance with the procedures described in DOTD TR 305.
- B) The specific gravity of the test specimens shall be determined according to DOTD TR 304.
 - 1) Sort the test specimens into two groups so that the average specific gravity of the specimens in group 1 is essentially the same as that of group 2. Test the specimens in group 1 for Marshall stability and

flow as described in DOTD TR 305. Immerse the group 2 specimens in the Asphalt Mix Release Agent (diluted per manufacturer's instructions) for 6 hours at room temperature.

- 2) Remove the group 2 specimens from the bath; surface dry with a clean rag or paper towel. Test the specimens for stability and flow as described in DOTD TR 305.

- 3) The numerical index of resistance of bituminous mixtures to the detrimental effect of Asphalt Mix Release Agent shall be expressed as a percentage of the original stability as follows. A minimum of 95% retained stability is required.

$$\text{Index of retained stability} = \frac{S2}{S1} \times 100$$

Where: S2 = Average Marshall stability of group 2 after immersion.

S1 = Average Marshall stability of group 1 after immersion.

Field Evaluation

The Department will require an Asphalt Mix Release Agent to prove its performance through field use prior to placement upon the Qualified Products List. The field evaluation will be performed by District Laboratory personnel, and shall entail application of the material to a truck bed with subsequent observation of hot mix being dumped from the bed. Comparison to other trucks dumping hot mix from beds sprayed with a previously approved Asphalt Mix Release Agent is the basis for this evaluation.

Evaluation Time

Laboratory testing - 2 weeks

Field evaluation - 2 months

GENERAL:

Upon completion of the evaluation, the submitter will be notified in writing concerning the results of the evaluation and whether the product will or will not be added to the Qualified Products List. The Department reserves the right to reevaluate any product at any time.

PROJECT ACCEPTANCE REQUIREMENTS:

Any Asphalt Mix Release Agent on the list may be used without sampling and pretesting provided it is properly identified as being the specific material on the list. However, sampling and testing before use may be required whenever a product is questionable for any reason.

DISQUALIFICATION:

Any product may be removed from the Qualified Products List for non-conformance with specifications or performance requirements. The Department must be notified in writing of any change in product formulation. Significant changes may require reevaluation of the product.

REQUALIFICATION:

A product which has been disqualified and removed from the Qualified Products List will be considered for reevaluation only after submission of a formal request along with acceptable evidence that the problems causing the disqualification have been resolved.

DOTD MATERIALS AND TESTING SECTION COORDINATOR:

Section

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Approved 8-01-02

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MATERIALS ENGINEER ADMINISTRATOR